LISTING OF CLAIMS

1. (Previously Presented) An electronic component, comprising:

a tuning module of the zero intermediate frequency dual conversion, upconversion then downconversion type, possessing an input able to receive digital terrestrial or cable television analog signals composed of several channels, a bandpass filter of the surface acoustic wave type disposed between the two frequency transposition stages and delivering a filtered analog signal containing the information conveyed by a desired channel and so-called "adjacent channel" information, a baseband filtering stage disposed on the two quadrature output paths of the second frequency transposition stage for performing a first filtering of the adjacent channel information;

a multibit analog/digital conversion stage linked to the output of the baseband filtering stage; and

a digital processing block comprising a stage for correcting the defects of phase- and amplitude-pairing of the two processing paths, and a channel decoding digital module, linked to the output of the defect correcting stage, and comprising a demodulation stage, a digital filtering stage for eliminating the said adjacent channel information, and an error correcting stage for delivering a stream of data packets corresponding to the information conveyed by the desired channel,

wherein, with the exception of the surface acoustic wave filter of the tuning module, all circuits within the tuning module, the analog/digital conversion stage and the digital processing block are disposed within an integrated circuit that is fabricated on a single monolithic substrate.

2. (Original) The component according to Claim 1, wherein the first frequency transposition stage is able to receive a first transposition signal having a frequency equal either to the sum of the frequency of the desired channel and of a first transposition frequency greater than the upper limit of the said frequency span, or the difference between the said first transposition frequency and the frequency of the desired channel, and wherein the second frequency transposition stage is able to receive a second transposition signal having the said first transposition frequency, in that the passband of the surface acoustic wave filter is of the order of two to three times the frequency width of a channel, and wherein the bandpass filtering stage possesses an upper cutoff frequency around 20% greater than the frequency half-width of a channel.

3. (Original) The component according to Claim 2, wherein the passband of the surface acoustic wave filter is of the order of 20 MHz.

4. (Original) The component according to Claim 1, wherein the resolution of the analog/digital conversion stage is greater than or equal to 4 bits.

5. (Original) The component according to Claim 1, wherein the sampling frequency of the analog/digital conversion stage is greater than around 2.5 times the upper cutoff frequency of the baseband filtering stage.

6. (Original) The component according to Claim 5, wherein the sampling frequency of the analog/digital conversion stage is greater than 10 times the upper cutoff frequency of the baseband filtering stage.

7. (Original) The component according to Claim 1, wherein the cutoff frequency of the digital filtering stage is equal to the frequency half-width of a channel.

8. (Original) The component according to Claim 1, further including a grounding metal plate glued to a rear face of the substrate by a conducting glue.

9. (Original) The component according to Claim 1, wherein the substrate has a first type of conductivity, and wherein elements performing digital processing are disposed in a part of the substrate that is isolated from the remaining part of the substrate by a semiconducting barrier having a second type of conductivity different from the first type of conductivity, and wherein the semiconducting barrier is biased by a bias voltage different from that supplying the isolated part of the substrate.

10. (Original) The component according to Claim 1, wherein the component is a receiver of digital terrestrial or cable television signals.

11. (Previously Presented) A device, comprising:

a surface acoustic wave filter; and

an integrated circuit embodied on a single monolithic substrate in which each of the following circuit components are fabricated on that single monolithic substrate:

an input receiving an analog signal including a plurality of channels;

an upconversion device to upconvert the received analog signal;

a first port for off substrate connection to an input of the surface acoustic wave filter and coupled to receive the upconverted analog signal for application thereto;

a second port for off substrate connection to an output of the surface acoustic wave filter to receive a filtered upconverted signal therefrom; and

a downconversion device coupled to the second port to downconvert the filtered upconverted signal to a baseband signal centered at zero frequency;

a baseband filtering circuit that filters the baseband signal to generate a filtered analog baseband signal;

an analog-to-digital converter circuit that converts the filtered analog baseband signal to a digital baseband signal; and

a digital baseband filtering stage that filters the digital baseband signal to generate a filtered digital baseband signal.

12. (Original) The device of claim 11 wherein the first and second ports carry signals on and off, respectively, the integrated circuit substrate.

13. (Original) The device of claim 11 wherein the upconversion device and downconversion device comprises a zero intermediate frequency dual conversion tuner.

14. (Original) The device of claim 11 wherein the channels of the analog signal extend over a frequency span and wherein the upconversion device upconverts the received analog signal to a frequency that is higher than an upper limit of the frequency span.

15. (Original) The device of claim 14 wherein the upconversion device upconverts the received analog signal to a frequency that is the sum of a desired channel frequency plus the upper limit of the frequency span.

16. (Original) The device of claim 11 wherein the surface acoustic wave filter is a bandpass filter having a pass band of at least two times a frequency width of a channel in the analog signal.

17. (Canceled).

18. (Previously Presented) The device of claim 11 wherein the filtered upconverted signal includes both signals relating to the selected channel and adjacent channel information, and wherein the baseband filtering circuit performs filtering on the adjacent channel information in the baseband signal.

19. (Previously Presented) The device of claim 11 wherein the baseband filtering circuit performs both in phase and quadrature phase filtering of the baseband signal.

20. (Previously Presented) The device of claim 11 wherein the baseband filtering circuit is a low pass filter having an upper cut-off frequency slightly greater than a frequency halfwidth of a channel.

Claims 21-22. (Canceled).

23. (Previously Presented) The device of claim 11 wherein the filtered upconverted signal includes both signals relating to the selected channel and adjacent channel information, and wherein the digital baseband filtering stage performs filtering on the adjacent channel information in the baseband signal.

24. (Previously Presented) The device of claim 11 wherein the digital baseband filtering stage is a low pass filter having an upper cut-off frequency substantially equal to a frequency halfwidth of a channel.

25. (Previously Presented) The device of claim 11 wherein the integrated circuit substrate additionally includes the following circuit components:

means for delivering a stream of data packets corresponding to information in a desired channel of the analog signal from the filtered digital baseband signal.

26. (Original) The device of claim 11, wherein the device is a receiver of digital terrestrial or cable television signals.

27. (Original) The device of claim 11 wherein the analog signal is one of a digital terrestrial or cable television signal.

28. (Previously Presented) A circuit, comprising:

an input receiving an analog signal including a plurality of channels;

an upconversion device to upconvert the received analog signal;

a first filter that filters the received analog signal and generates a filtered upconverted signal comprising information from a selected one of the channels and adjacent channel information;

a downconversion device to downconvert the filtered upconverted signal to an analog baseband signal centered at zero frequency;

a second filter that filters the analog baseband signal and generates a filtered analog baseband signal comprising information from the selected one of the channels and less of the adjacent channel information;

a digital-to-analog converter to convert the analog baseband signal to a digital baseband signal; and

a third filter that digitally filters the digital baseband signal and generates a filtered digital baseband signal comprising only information from the selected one of the channels;

wherein all of the previously recited components of the circuit, with the exception of the first filter, are implemented on a single integrated circuit chip fabricated on a single semiconductor substrate and the first filter is connected to the single integrated circuit chip as an off-chip component.

29. (Canceled).

30. (Previously Presented) The circuit of claim 28 wherein the first filter is a surface acoustic wave filter.

31. (Original) The circuit of claim 28 wherein the analog signal is one of a digital terrestrial or cable television signal.

32. (Original) The circuit of claim 28 wherein the upconversion device and downconversion device comprises a zero intermediate frequency dual conversion tuner.

33. (Original) The circuit of claim 28 wherein the channels of the analog signal extend over a frequency span and wherein the upconversion device upconverts the received analog signal to a frequency that is higher than an upper limit of the frequency span.

34. (Original) The circuit of claim 33 wherein the upconversion device upconverts the received analog signal to a frequency that is the sum of the frequency for the selected one of the channels plus the upper limit of the frequency span.

35. (Original) The circuit of claim 28 wherein the first filter is a bandpass filter having a pass band of at least two times a frequency width of a channel in the analog signal.

36. (Original) The circuit of claim 35 wherein the second filter is a low pass filter having an upper cut-off frequency slightly greater than the frequency halfwidth of a channel.

37. (Original) The circuit of claim 36 wherein the third filter is a low pass filter having an upper cut-off frequency substantially equal to the frequency halfwidth of a channel.

38. (Original) The circuit of claim 28 further including means for decoding the filtered digital baseband signal to deliver a stream of data packets corresponding to information in the selected one of the channels.

39. (Original) The circuit of claim 38 wherein all of the recited components of the circuit, with the exception of the first filter, are implemented on a single integrated circuit chip and the first filter is connected to the single integrated circuit chip as an off-chip component.

40. (Original) The circuit of claim 28, wherein the circuit is included within a digital terrestrial or cable television signal receiver box.

41. (Previously Presented) A method, comprising:

receiving an analog signal including a plurality of channels;

upconverting the received analog signal;

first filtering the received analog signal to generate a filtered upconverted signal comprising information from a selected one of the channels and adjacent channel information;

downconverting the filtered upconverted signal to an analog baseband signal centered at zero frequency;

second filtering the analog baseband signal to generate a filtered analog baseband signal comprising information from the selected one of the channels and less of the adjacent channel information;

digital-to-analog converting the analog baseband signal to a digital baseband signal; and

third digitally filtering the digital baseband signal to generate a filtered digital baseband signal comprising only information from the selected one of the channels;

wherein all of the recited steps, with the exception of the first filtering step, are performed by circuit components of an integrated circuit chip which is fabricated on a single semiconductor substrate and the first filtering step is implemented by a component that is off-chip from the integrated circuit chip.

42. (Canceled).

43. (Original) The method of claim 41 wherein the analog signal is one of a digital terrestrial or cable television signal.

44. (Original) The method of claim 41 wherein the channels of the analog signal extend over a frequency span and wherein upconverting upconverts the received analog signal to a frequency that is higher than an upper limit of the frequency span.

45. (Original) The method of claim 44 wherein upconverting upconverts the received analog signal to a frequency that is the sum of the frequency for the selected one of the channels plus the upper limit of the frequency span.

46. (Original) The method of claim 44 wherein first filtering comprises bandpass filtering through a pass band of at least two times a frequency width of a channel in the analog signal.

47. (Original) The method of claim 46 wherein second filtering comprises low pass filtering with an upper cut-off frequency slightly greater than the frequency halfwidth of a channel.

48. (Original) The method of claim 47 wherein third filter comprises low pass filtering with an upper cut-off frequency substantially equal to the frequency halfwidth of a channel.

49. (Original) The method of claim 41 further including decoding the filtered digital baseband signal to deliver a stream of data packets corresponding to information in the selected one of the channels.

50. (Original) The method of claim 49 wherein all of the recited steps, with the exception of the first filtering step, are performed by a single integrated circuit chip and first filtering is performed off-chip from the integrated circuit chip.